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METHOD FOR FORMING ALIGNMENT MARK

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ABSTRACT

PURPOSE: To enable a mark to be detected accurately by generating a surface roughness due to implantation of a heavy ion onto either surface of a semiconductor *wafer*, namely a *mark* forming region or its ground region.

CONSTITUTION: For example As(sup +) is implanted into a mark forming region of a surface of a semiconductor wafer 1, thus enabling surface roughness to be generated only at a region 11 where ion is implanted. When *laser* beam is emitted onto this mark when aligning the mask, reflected light intensity becomes smaller in the region 11 where surface roughness is produced by *ion* *implantation* as compared with other ground regions. Also, when surface roughness is produced at the ground regions other than the mark forming region by implanting a heavy ion, reflected light intensity becomes larger also at the mark forming region as compared with the ground regions, thus preventing influence due to fluctuation of the photoresist thickness and detecting an original mark position on the wafer accurately and constantly.